

Applicants : ERICSSON et al.
Appl. No. : 09/810,123

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48. (Amended) The method of claim 1 wherein said treatment results in increased survival of the mammal treated compared with treatment with huMAb4D5-8 (HERCEPTIN®) alone.

Remarks

In the outstanding Office Action the Examiner required restriction to one of eight groups of claims. Applicants hereby elect Group II, which includes claims 1-48. Thus, Applicants have amended independent claim 1 and dependent claims 4-6 to refer to anti-ErbB2 antibodies. Claims 3 and 7 have been cancelled and the dependent claims have been adjusted accordingly. The changes to the claims are shown on the attached page captioned **VERSION WITH MARKINGS TO SHOW CHANGES MADE**.

Applicants submit that the present application is in condition for examination on the merits and respectfully request the same. If any issues remain, the Examiner is requested to telephone Applicants' counsel at the number listed below in order to resolve such issues promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: July 30, 2002

By: _____

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 3, 7 and 49-54 have been cancelled.

Claims 1, 4-6, 8, 20, 22-24, 27, 29, 32, 34, 42 and 46-48 have been amended as follows. For the Examiner's convenience, claims that have not been cancelled or amended are also reproduced below and marked "reiterated."

1. (Amended) A method for the treatment of a tumor in a mammal, wherein the tumor is characterized by the overexpression of an ErbB₂ receptor and does not respond, or responds poorly, to treatment with an anti-ErbB₂ antibody, comprising administering to the mammal a therapeutically effective amount of a conjugate of the anti-ErbB₂ antibody with a maytansinoid.

2. (Reiterated) The method of claim 1 wherein the mammal is human.

4. (Amended) The method of claim 13 wherein the anti-ErbB₂ antibody is a growth inhibitory antibody.

5. (Amended) The method of claim 13 wherein the anti-ErbB₂ antibody induces cell death.

6. (Amended) The method of claim 13 wherein the anti-ErbB₂ antibody induces apoptosis.

8. (Amended) The method of claim 17 wherein the tumor is cancer.

9. (Reiterated) The method of claim 8 wherein the cancer is selected from the group consisting of breast, ovarian, stomach, endometrial, salivary gland, lung, kidney, colon, colorectal, thyroid, pancreatic, prostate and bladder cancer.

10. (Reiterated) The method of claim 9 wherein the cancer is breast cancer.

11. (Reiterated) The method of claim 10 wherein the breast cancer overexpresses ErbB₂ at a 2+ level or more.

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12. (Reiterated) The method of claim 11 wherein the breast cancer overexpresses ErbB2 at a 3+ level.

13. (Reiterated) The method of claim 12 wherein the breast cancer is a metastatic breast cancer.

14. (Reiterated) The method of claim 12 wherein the antibody has a biological characteristic of a 4D5 monoclonal antibody.

15. (Reiterated) The method of claim 14 wherein the antibody binds essentially the same epitope as a 4D5 monoclonal antibody.

16. (Reiterated) The method of claim 14 wherein the antibody is the monoclonal antibody 4D5 (ATCC CRL 10463).

17. (Reiterated) The method of claim 14 wherein the antibody is humanized.

18. (Reiterated) The method of claim 17 wherein the antibody is selected from the group consisting of humanized antibodies huMAb4D5-1, huMAb4D5-2, huMAb4D5-3, huMAb4D5-4, huMAb4D5-5, huMAb4D5-6, huMAb4D5-7 and huMAb4D5-8 (HERCEPTIN®).

19. (Reiterated) The method of claim 18 wherein the antibody is humanized antibody huMAb4D5-8 (HERCEPTIN®).

20. (Amended) The method of claim 13 wherein the antibody is an antibody fragment.

21. (Reiterated) The method of claim 20 wherein the antibody fragment is selected from the group consisting of a Fab, Fab', F(ab')₂, F_v fragment, diabody, linear antibody, and single-chain antibody molecule.

22. (Amended) The method of claim 13 wherein the maytansinoid is maytansine.

23. (Reiterated) The method of claim 13 wherein the maytansinoid is maytansinol.

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24. (Reiterated) The method of claim 13 wherein the maytansinoid is a maytansinol ester.
25. (Reiterated) The method of claim 24 wherein the maytansinoid is a C-3 ester of maytansinol.
26. (Reiterated) The method of claim 25 wherein the maytansinoid is DM1 shown in Figure 1.
27. (Amended) The method of claim 13 wherein the antibody and maytansinoid are conjugated by a bispecific chemical linker.
28. (Reiterated) The method of claim 27 wherein said chemical linker is N-succinimidyl-4-(2-pyridylthio)propanoate (SPDP) or N-succinimidyl-4-(2-pyridylthio)pentanoate (SPP).
29. (Amended) The method of claim 13 wherein the antibody and maytansinoid are conjugated by a linking group selected from the group consisting of a disulfide, thioether, acid labile, photolabile, peptidase labile, and esterase labile group.
30. (Reiterated) The method of claim 29 wherein the linking group is a disulfide or a thioether group.
31. (Reiterated) The method of claim 30 wherein the linking group is a disulfide group.
32. (Reiterated) The method of claim 1 wherein the conjugate comprises 1 to about 10 maytansinoid molecules per antibody molecule.
33. (Reiterated) The method of claim 32 wherein the conjugate comprises from about 3 to about 5 maytansinoid molecules per antibody molecule.
34. (Amended) The method of claim 17 further comprising the administration of a second antibody which binds ErbB2.
35. (Reiterated) The method of claim 34 wherein the second antibody comprises monoclonal antibody 2C4 or humanized 2C4.

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36. (Reiterated) The method of claim 34 wherein the second antibody is humanized antibody, huMAb4D5-8 (HERCEPTIN®).

37. (Reiterated) The method of claim 1 wherein treatment with the conjugate is followed by treatment with an unconjugated anti-ErbB antibody.

38. (Reiterated) The method of claim 32 wherein the conjugate is administered weekly at a dose of 0.1 to 10 mg/kg body weight.

39. (Reiterated) The method of claim 38 wherein said administration is followed by a dose of 0.3 mg/kg body weight approximately 10 weeks later.

40. (Reiterated) The method of claim 33 wherein the conjugate is administered weekly at a dose of 1 to 3 mg/kg body weight.

41. (Reiterated) The method of claim 40 wherein said administration is followed by a dose of 0.3 mg/kg body weight approximately 10 weeks later.

42. (Amended) The method of claim 17 wherein the conjugate is administered weekly at a dose of 0.1 to 5 mg/kg body weight for 4 to 6 weeks, followed by maintenance treatment with unconjugated anti-ErbB2 antibody.

43. (Reiterated) The method of claim 42 wherein the unconjugated antibody is humanized antibody huMAb4D5-8 (HERCEPTIN®) or humanized 2C4.

44. (Reiterated) The method of claim 34 wherein said second antibody is conjugated with a cytotoxic agent.

45. (Reiterated) The method of claim 44 wherein the cytotoxic agent is a maytansinoid.

46. (Amended) The method of claim 17 wherein said treatment has an improved objective response rate compared to treatment with huMAb4D5-8 (HERCEPTIN®) alone.

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47. (Amended) The method of claim 17 wherein said treatment has a longer duration of response than treatment with huMAb4D5-8 (HERCEPTIN[®]) alone.

48. (Amended) The method of claim 17 wherein said treatment results in increased survival of the mammal treated compared with treatment with huMAb4D5-8 (HERCEPTIN[®]) alone.

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